

REMARKS

Claims 1-13 are pending. Claims 1, 7, and 10-13 have been previously presented. Claims 2-6, 8, and 9 are original. No new matter has been introduced by this amendment.

1. Claim Rejections under 35 U.S.C. § 102

Claims 11-13 have been rejected under 35 U.S.C. § 102(b) over Huang (U.S. Pat. Pub. No. 2002/0136978), or under 35 U.S.C. § 102(e) over corresponding issued U.S. Pat. No. 6,855,501. The Applicants respectfully traverse these rejections based on the following remarks.

The Examiner asserts that Huang discloses a substrate having a support, a conductive layer on the support, and a photoconductive layer, referring to the photoreceptor support comprising a cylinder, drum or belt; the chargeable particles; and the charged carrier particles comprising zinc oxide, respectively (Office Action, pages 3-6). Huang, however, expressly teaches that the chargeable particles and the charged carrier particles are part of a composition which is triboelectrically charged and attached to a selectively charged surface (151). The attached particles are then transferred from the surface (151) to the target substrate (164) via printing (see paragraph 0013, lines 1-6; paragraph 0021, lines 1-15; and Fig. 7). In other words, both the chargeable particles and the charged carrier particles are attracted to the surface (151) and then transferred to the target substrate (164). The Applicants respectfully submit that a person with ordinary skill in the art would not consider the chargeable particles and the charged carrier particles as part of the substrate under these circumstances, as required by independent claims 11-13.

Further, the Examiner asserts that the chemical compounds in the carrier particles prior to transfer to the target substrate disclosed in Huang is a chemically functional layer on the photoconductive layer, the chemical functional layer providing a protective layer for the photoconductive layer and a chemically reactive surface for compounds deposited on the surface (Office Action, pages 3-6). Huang, however, expressly teaches that these

chemical compounds, as part of the charged particles, are triboelectrically charged and attached to a selectively charged surface (151). The attached particles, including the chemical compounds, are then transferred from the surface (151) to the target substrate (164) via printing (see paragraph 0021, lines 1-15; and Fig. 7). As discussed above, a person with ordinary skill in the art would not consider the chemical compounds contained in the chargeable particles as part of the substrate under these circumstances, as required by independent claims 11-13.

Also, Huang does not teach or suggest any chemically reactive surface on the chemically functional layer disposed on the support, as required by independent claims 11-13. As discussed above, the chemical compounds, as part of the charged particles, are triboelectrically charged and attached to the surface (151), and then transferred from the surface (151) to the target substrate (164) via printing. At best, this can be read as teaching an electrically functional surface to which charged particles attach electrostatically. Since the particles are subsequently transferred to the target substrate (164), the chemical compounds/charged particles are clearly NOT chemically attached to the surface (151).

The fact that the target substrate (164) may have reactive groups which react with the transferred chemical compounds is irrelevant because the target substrate (164) is separate from the photoreceptor support comprising a cylinder, drum or belt (the asserted substrate). In other words, the reactive groups are not part of the asserted substrate.

Still further, the Examiner has asserted that the chemical compounds in the charged particles function as a chemically functional layer disposed on the support (the photoreceptor support, NOT the target substrate) (Office Action, page 4). Huang, however, does not teach or suggest any selective chemical de-protection on the chemically functional layer disposed on the support, as required by independent claim 12. Rather, Huang expressly teaches that coupling reactions occur on the target substrate (164) (see Figs. 1 and 7; and paragraphs 0152 – 0157).

In view of the above, the Applicants respectfully submit that Huang does not teach or suggest all the claim limitations as recited in independent claims 11-13.

Accordingly, the rejections against independent claims 11-13 are improper and should be withdrawn.

2. Claim Rejections under 35 U.S.C. § 103(a)

Claims 1-10 have been rejected under 35 U.S.C. § 103(a) over Huang in view of Cabuz et al. (U.S. Pat. No. 6,184,608). The Applicants respectfully traverse these rejections based on the following remarks.

As discussed above in section 1, Huang does not teach or suggest a substrate having a support, a conductive layer on the support, and a chemically functional layer, the chemical functional layer providing a protective layer for the dielectric layer and a chemically reactive surface for compounds deposited on the surface. Cabuz does not supply the elements missing from Huang compared to the claims. Accordingly, the rejection against independent claim 1, and thus the rejections against claims 2-10, which all depend from independent claim 1, are improper and should be withdrawn.

Further, Cabuz is directed to a *microactuator array* device, which includes a plurality of generally parallel thin flexible polymer sheets bonded together in a predetermined pattern to form *an array of unit cells* on at least one layer (see Abstract; emphasis added). “Thin layers of conductive films and dielectric materials are deposited on the sheets to form a plurality of *electrodes associated with the array of unit cells* in a conventional manner” (see column 1, lines 62-65; emphasis added). The polymers are used as materials for *forming actuators*, not a support (see column 2, lines 26-28; emphasis added). “The polymeric layers 13 also include thin metal films 31 on the front and back surfaces of each sheet, to *function as electrodes*” (see column 4, lines 4-6; emphasis added).

There is no teaching or suggestion that the dielectric layer disclosed in Cabuz is used to solve any problem in connection with selective micron and nanometer scale deposition. Accordingly, the Applicants respectfully submit that Cabuz is not an analogous art in that it is in a field different from that of applicant's endeavor, and is not a reference which, because of the matter with which it deals, logically would have

commended itself to an inventor's attention in considering his or her invention as a whole (see MPEP 2141.01(a)). Thus, Cabuz should be disqualified as a reference.

Regarding claim 10, the Examiner asserts that "Huang teaches the *target substrate* can comprise a chemical functional layer", which "can include reactive groups" (Office Action, page 9; emphasis added). As discussed above in section 1, the Examiner has asserted that the photoreceptor support functions as the support as recited in independent claim 1. The fact that the target substrate (164) may have reactive groups which react with the transferred chemical compounds is irrelevant because the target substrate (164) is separate from the photoreceptor support comprising a cylinder, drum or belt (the asserted substrate). In other words, the reactive groups are not part of the asserted substrate. Accordingly, the rejection against claim 10 is improper and should be withdrawn.

3. Conclusion

Based on the above remarks, the Applicants respectfully submit that the claims are in condition for allowance. The examiner is kindly invited to contact the undersigned agent to expedite allowance.

Respectfully submitted,

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